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**MEMORANDUM BETWEEN  
THE DEPARTMENT OF DEFENSE OF THE UNITED STATES OF AMERICA  
AND THE MINISTRY OF DEFENSE OF THE RUSSIAN FEDERATION  
ON COOPERATION IN ENVIRONMENTAL PROTECTION ISSUES**

The Department of Defense of the United States of America and the Ministry of Defense of the Russian Federation, hereinafter "the Parties";

Guided by the Declaration on Cooperation between the United States of America and the Russian Federation, signed in Vancouver on 4 April 1993 by Presidents Clinton and Yeltsin;

Guided by the Memorandum of Understanding and Cooperation on Defense and Military Relations Between the Department of Defense of the United States of America and the Ministry of Defense of the Russian Federation on 8 September 1993;

Attaching great importance to the protection and improvement of environmental quality;

Emphasizing the potential of military forces to help solve environmental problems;

Desiring to establish closer and longer-term cooperation between the Armed Forces in areas connected with the protection of the environment;

Affirm their readiness to broaden cooperation in the area of environmental protection, together with conservation agencies of the two countries, in accordance with the laws of each Party.

The Parties may carry out cooperation in the following major areas:

The exchange of information about the organization of environmental protection activities;

The exchange of information on the methods, means, and technologies for protecting and improving the environment, which are used during daily troop activities and to mitigate the environmental consequences of accidents or emergencies at military facilities;

The exchange of information about ecologically sound handling of household, industrial, hazardous and radioactive waste;

The exchange of information about the environmental aspects of destruction and disposal of weapons and military hardware;

The exchange of information about the clean up of former military sites;

The exchange of information about the management of natural and cultural resources under the control of military establishments.

Cooperation may be initiated in the above-mentioned areas subject to conclusion of the appropriate implementing agreements that provide for the following specific forms of cooperation:

- Conducting conferences and seminars;
- Publishing reports and articles on ecological problems;
- Exchanging delegations and specialists;
- Executing joint scientific research;
- Training specialists in courses on environmental protection issues at military schools;
- Participating jointly in planning and implementing environmental measures, carried out in the process of daily troop activities and in emergency situations;
- Other mutually agreed-on forms.

Done at Moscow on June, 1995, in duplicate in the English and Russian languages, both texts being equally authentic.

FOR THE DEPARTMENT OF DEFENSE  
OF THE UNITED STATES OF AMERICA:

A handwritten signature in black ink, appearing to read "William J. Perry".

FOR THE MINISTRY OF DEFENSE  
OF THE RUSSIAN FEDERATION:

A handwritten signature in black ink, consisting of stylized, overlapping strokes.

**Draft Agenda**  
**U.S.-Russian Environmental Security Cooperation**  
**February 26-March 1, 1996 Meetings**

**SUNDAY, February 25**

1900 Mike McNerney/Kathy Elliott meet with OSIA at Dulles  
1930 Arrival of Russian delegation, Aeroflot flight 317 arriving at Dulles  
--Mike McNerney and OSIA to meet; transport to Hilton via DoD van

**MONDAY, February 26**

\*\*\*0930-1230 meetings will be in the Pentagon  
0900 DoD van departs Hilton for Pentagon  
0930-0945 Welcome, Rm 3E792  
--Ms. Goodman  
0945-1000 Introductions, Rm 3E792  
--Mr. Vest, Col. Sheremetev  
1000-1045 Russian presentation on environmental security organizational structure  
1045-1130 U.S. presentation on environmental security organizational structure and  
--Curtis Bowling, DADUSD(Environmental Quality)  
1130-1215 Discussions, Rm 1E801#2  
--COL Garth Chandler, Legislative Affairs, Maureen Sullivan,  
1230-1245 Return to National Airport Hilton via DoD van Mall entrance  
1300-1400 Lunch  
1400-1445 U.S. presentation on environmental quality issues for the military  
--Peter Walsh  
1445-1500 Break  
1500-1545 U.S. presentation on environmental quality issues for the military (cont.)  
--Peter Walsh  
1545-1645 Russian presentation on environmental quality issues for the military  
1700 DoD van returns to Pentagon

**TUESDAY, February 27**

0745 DoD van departs Mall entrance  
0800 DoD van departs Hilton  
0800-1900 Visit to Langley Air Force Base  
--discussions on environmental training and environmental assessments  
--U.S. escorts: Capt. Bill Kontess, Air Force Environmental Compliance;

**WEDNESDAY, February 28**

0830-0930 Russian presentation on air pollution from rocket launches  
0930-1030 Discussions  
--Air Force representatives  
1030-1100 Remote sensing for Coral Reefs  
--Eric Shulenberger, Office of Naval Research  
1100-1200 Round Table discussion on the GCC military base cleanup project  
--Peter Jutro, EPA; Thomas Murphy  
1200-1330 Lunch  
1330-1430 Russian presentation on naval radioactive waste and nuclear fuel  
1430-1530 Discussions  
--Steve Trautman, Navy (Naval Reactors)  
1530-1630 General discussions on draft program of cooperation, joint projects, etc  
1800 Official Reception for U.S. and Russian participants

**THURSDAY, February 29**

0745 DoD van departs Mall entrance  
0800 DoD van departs Hilton  
0800-1800 Visit to Aberdeen Proving Grounds

- discussions on POL contamination cleanup, public health assessments,
- U.S. escorts: Mike McNerney; Shah Choudhury, ODUSD(ES) Cleanup

**FRIDAY, March 1**

- 0800-0900 Russian presentation on ozone-safe technologies for weapons systems
- 0900-1000 U.S. presentation on ozone-safe technologies for weapons systems
  - Paul Piscopo, ODDR&E(AT)
- 1000-1100 Discussions
  - Bill Goins, Pollution Prevention; Military Services representatives
- 1100-1200 Closing Comments from Ms. Goodman and COL Sheremetev
- 1200-1330 Lunch
- 1700 Departure of Russian Delegation
  - Mike McNerney and OSIA to escort to Dulles via DoD van

**PROTOCOL**  
**of the Meeting of Experts of the Department**  
**of Defense of the United States of America**  
**(US DoD) and the Ministry of Defense (MOD) of**  
**the Russian Federation on Environmental Protection**  
**in Washington D.C.,**  
**26 February - 1 March 1996.**

The participants of the meeting were guided by the Memorandum between the Department of Defense of the United States of America and the Ministry of Defense of the Russian Federation on cooperation in environmental protection issues signed by William Perry, Secretary of Defense of the United States of America, and Pavel Grachev, Minister of Defense of the Russian Federation, in June 1995.

They jointly considered, discussed and exchanged material, which produced results in the following areas:

- Environmental protection organizations in the Armed Forces of the United States and Russia;
- Standardized government environmental regulations on military activity;
- Environmental education and training of personnel;
- Evaluation of environmental risk at military installations;
- Methods and technology to eliminate petroleum, oil and lubricant (POL) contamination;
- The effects of missile and space activity on the environment;
- The use of ozone safe technology in the Armed forces;
- The handling of radioactive wastes;
- The use of unclassified products for environmental purposes that are derived from classified intelligence capabilities.

The participants of the meeting proposed the following:

1. To consider the following cooperation between the Department of Defense of the US and the Ministry of Defense of the Russian Federation in the area of environmental protection a priority for 1996-97:

- Environmental education and training of military personnel;
- The clean-up of POL contamination at military installations;

- Evaluation of the effects of missile and space activities on the surrounding environment;
- Solutions to environmental problems related to Russian and US forces stationed abroad;
- The use of methodological, technical and scientific potentials of the US DoD and Russian MOD to help solve global and regional environmental problems;
- The exchange of unclassified derived products (based on classified intelligence assets).

2. In order to carry out this cooperation, it is advisable that the US DoD and Russian MOD:

- Consider the possibility of Russian instructors and environmental specialists taking environmental courses at US military schools in 1996-97.
- Suggest, prepare and agree upon a system of exchange for lectures on military ecology in 1997, and the training of Russian scientists, instructors and other specialists in environmental courses in the US Air Force, Army and Navy.
- Consider the possibility of preparing and implementing a project on environmental research to improve the environment of military installations in Russia and the US (for example, at Plesetsk and Vandenburg).
- Conduct seminars for military and civilian specialists to exchange information on the elimination of surface and underground POL contamination on military installations in 1997 in the US and Russia.
- Develop in 1996 and review in 1997, joint methodological approaches (a seminar, for example ) to evaluate the environmental consequences of Russian and American troops stationed abroad.
- Prepare and exchange unclassified derived products on environmental issues associated with the clean-up of military bases.
- Determine how to operate electronic mail communication (such as Internet) to facilitate this work. The US DoD will assist to the fullest extent possible the Russian MOD in acquiring such communication capability.


3. The US DoD should look into the possibility of being featured in 1996 in a special edition of the environmental magazine "Ecos" devoted to

environmental problems and issues of environmental protection in the Armed Forces of Russia.

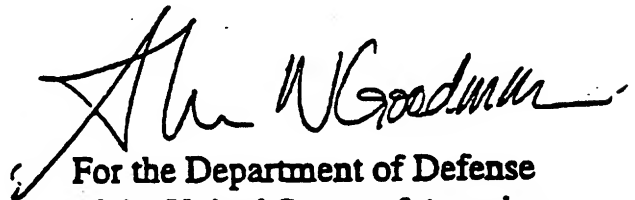
4. Implement an exchange of environmental information and materials (methodologies, reference material, articles, etc.) that are of mutual interest and agreed to by both sides.

5. The US DoD and Russian MOD should look at the possibility of including the proposed measures in the area of environmental protection in a draft plan for cooperation during 1997 between the US DoD and Russian MOD. They should report the results of their agreement to each other by 1 May 1996, and include an indication of the desired time frame, how they will be conducted, the number of participants, and how financing will be provided.

6. The US DoD and Russian MOD will endeavor to organize joint work in environmental protection. Such cooperation can be useful not only for the US and Russia, but for the entire world community. The two countries have already begun such cooperation in Europe and will continue to expand the reach of this cooperation under the auspices of the Asia-Pacific environmental conference, which will be held in Hawaii in September 1996. The parties will demonstrate to other Asia-Pacific nations their environmental cooperation through an exhibit at this conference.



For the Ministry of Defense  
of the Russian Federation



For the Department of Defense  
of the United States of America

## **U.S.-Russian Environmental Security Cooperation Meetings**

26 Feb-01 Mar 1996

26 Feb 96

Meetings held at Pentagon

0930-1000 Greeting and Introductions

-The Russian delegation asked to further develop 3 of the 8 topics considered:

1) The forming of a joint U.S.-Russian group to discuss the effects of missile activity on the environment.

2) An educational exchange of instructors and officers.

3) Establishment of an international base to serve as a model of how a base would look that was actively following all environmental regulations and procedures.

-Other Issues:

1) The Russian side suggested the establishment of an environmental information database to deal with various environmental problems. The Russians want to have this established by the year 1997.

2) The Russian side proposed that the trilateral meeting be held this year on the Kola Peninsula in August. The American side is proposing the week of September 26 since Secretary Perry will be in Norway the end of September.

3) The Russian side has proposed that the U.S., Russia and Norway develop one format for the institutions providing financing.

1015-1215 Opening Presentations by Representatives from Both Sides

-Presentation by COL Sheremetev concerning the environmental security organizational structure.

-Presentation by COL Yunak. Presentation dealt with proposals for environmental training. Also discussed various sources of contamination (both sites and equipment) and Russian govt. environmental requirements for military sites. COL Yunak also asked how the U.S. govt. approaches these issues.

-Overview by Curtis Bowling on the U.S. govt. structure and how it relates to the environment. He also discussed the Federal and Public role concerning the environment, DoD operational capabilities, and the environmental security organization and its responsibilities.

-Discussion with COL. Chandler and Maureen Sullivan about how various environmental laws affect the military and how DoD addresses EPA regulations.

-Questions presented by Russian side: What are DoD's greatest environmental security challenges (environmentally and bureaucratically)? What kinds of legislative issues do we deal with? What kind of environmental legislation exists for troops stationed on foreign soil? What kind of environmental problems exist in actual military operations (ex: can environmental considerations shut down military operations)? How are issues resolved when there is a conflict between military and civilian interests?



-COL Sheremetev proposed establishing international guidelines for environmental security such as common minimum soil, water, etc standards for functioning, closing, and former military installations; common cleanup methodologies; standards for bases formerly holding foreign-stationed forces; etc. COL Sheremetev also proposed setting up a data bank to be shared for the exchange of environmental security information.

Meetings held at the Airport Hilton  
1400-1700

Presentation by Peter Walsh on environmental quality issues for the military.

Mr. Walsh discussed the following:

- The pollution prevention program and how it affects the design of weapons systems and the operation of current weapons systems.
- Challenges faced concerning cost reduction, laws on hazardous waste, treaties concerning hazardous waste and executive orders relating to environmental security.
- Strategies for installations, existing weapons systems and new weapons systems.
- Programming and Budgeting
- Education and Training programs
- Initiatives: Central Management of Hazardous Materials (the "pharmacy concept") and the "ENVVEST" program, which allows us to focus on areas that give the best return for the effort applied.

Presentation by COL Yunak on how they evaluate pollution and contamination at military sites and the surrounding areas.

Peter Walsh then discussed how the Americans work with environmental issues and the problems they encounter when doing this.

The Russian delegation asked questions about how to work with the media on environmental issues. The Russian delegation commented on how they had unsuccessfully faced this issue in the past. Peter Walsh related the problems of elimination of chemical weapons and the negative aspect that incineration had on public opinion and how DoD has tried to resolve that issue. Further discussions followed on working with the public when sensitive issues are involved.

27 Feb 96  
0800-1030

Travel to Langley AFB

-Rick Lemaire (ODUSD(ES)/Training) outlined for the Russian delegation the Department's environmental security education and training program, including DoD Instruction/policy for ES education, training and career development, organizations such as Defense Environmental Security Education, Training and Career Development

Committee and the Inter Service Environmental Education Review Board, and DoD's draft Personnel Exchange Agreements for exchanging environmental technical expertise (military and civilian personnel: professional, scientists and engineers).

Mr. Lemaire noted that personnel exchanges involving both DoD schools and Service centers of environmental excellence would prove beneficial for both countries. Such exchanges would facilitate the improvement of environmental training programs of each country and the transfer of environmental technologies between the countries, including other partners, such as Norway, Germany, etc...

-Representatives of the Russian delegation expressed interest in exploring the establishment of personnel (environmental course instructors, engineers and scientists) in CY96-97. Further, the representatives expressed interest in the Department's International Military Education and Training (IMET) program which currently provides funding of Russian personnel to take education and training offered at joint service and service schools, such as the Air Force Institute of Technology, Army Logistics Management College, and the Naval School Civil Engineer Corps Officers.

#### Environmental Tour of Langley AFB

Host: COL Thompson, Commander, First Support Group  
1030

Wing Environmental Brief: Mr. Ken Walker, Chief, Environmental Flight

- Overview of day-to-day environmental operations, including pollution prevention activities, compliance, conservation, and cleanup

- Russian delegation was especially interested in the following:

- a high-pressure vacuum that Langley uses for ground and surface water spill cleanup.

- various pollution prevention efforts presented in the briefing, including plastic, paper, and metal recycling; fuel filter recycling equipment; and POL and solvent reclamation systems.

- all aspects of POL contamination cleanup efforts at Langley

- interaction with the public

1130

Presentation on environmental self assessments and training: Mr. Ken Walker

- Self assessments help the installation to help itself. Areas where potential regulatory violations exist are identified and addressed before the regulators become involved. In-house environmental assessments also identify where procedures can be improved and where further training of personnel may be necessary.

- Mr. Walker emphasized the importance of training at all levels within the installation. Training of maintenance and operational personnel, even for those working on the flight line and in the shops, provides enormous aggregate benefits.

1230

Lunch/Gift Exchange

1400

**POL Cleanup Project Site**

-The delegation was intensely interested in the overview and tour of Langley's POL cleanup site. Delegation members asked specific questions relating to the schematics they were shown and requested detailed information on the system's equipment and operation.

1420

**Tour of fire-fighting and emergency response center**

-Langley personnel displayed their most modern spill-response equipment, including brass tools (to prevent sparks), protective suits, and computer monitoring and identification equipment.

1430

**Tour of Supply Center**

-Delegation toured Langley's "Hazmart" (Hazardous Materials Market), which utilizes DUSD(ES) "pharmacy concept." The Hazmart is the installation's central storage and distribution point for all hazardous materials, which are tracked on a database on loaned out on an as-needed basis. Langley has dramatically reduced its levels of hazardous waste by preventing materials such as paints and solvents from expiring or being wasted around the installation.

1500

**Tour of Vehicle Maintenance Shop**

-Langley personnel showed the delegation various pollution prevention equipment, including fuel filter recycling equipment, recycling systems for solvents, and tool degreasing equipment. The tool degreasing equipment, for example, eliminates the need for cleaning solvents, instead using soap, water, and a high-speed rotating basket that allows oil and grease to drip into a collection tank

1530

**visit F-15 Static Display**

1600

**Return to Hilton**

-Lap briefings on by Capt Bill Kontess (AF/Environmental Compliance) on various Air Force environmental activities, focusing on how the Air Force sets environmental priorities and sets its environmental budget.

2/28

**Meetings at the Hilton**

-On the morning of 28 February, the first of two possible projects using remote sensing capabilities of the intelligence community was discussed. Mr. Vest noted his desire to transfer a current project-looking at the use of unclassified derived products

(based on classified intelligence assets) to assist in the characterization and assessment of military base clean-up efforts-to the auspices of the Perry-Grachev agreement (now that it will no longer fall under the Environmental Working Group). Mr. Vest is the chair of the US side in this project, while Mr. Tolkachev has been the chair on the Russian side. Mr. Vest suggested that topics for discussion during this meeting could include: how to proceed with the work, the selection of a second site of military sites on which to create derived products, and the future schedule for this project. Col. Sheremetev provided the current Russian MOD Ecological Directorate's perspective on this project. The main issue to be resolved at present is: who will be Mr. Vest's counterpart. They agree that the MOD is the logical lead for this project, since it is addressing military base clean-up; however, the relationship among MOD, the intelligence service, and the Ministry of the Environment has not yet been resolved. There are indications, however, that the intelligence communities on both sides will continue to support this project. The two sides discussed the best approach to take in resolving this issue, including the writing of a letter by Mr. Vest to the Ministry of the Environment. Another issue to be resolved is the possible requirement for equipment on the Russian side. Mr. Vest requested that a list of likely equipment be prepared and provided to him. Col. Sheremetev then offered a detailed examination of the work the Ecological Directorate has conducted on environmental monitoring of military sites using air and space capabilities. This work has fallen into two categories: global and cartographic. The effects of different types of military activities and certain emergency situations on the environment were outlined. The presentation also included a description of some of the main technical specifications (e.g. types of cameras and the levels of resolutions produced, description of ground-based processing capabilities). Col. Sheremetev concluded with the expressed willingness to include such projects under the Perry-Grachev agreement. Mr. Vest welcomed this idea, noting that the U.S. will be able to learn a great deal in this area, because the US has not used these assets for military environmental purposes as extensively as Russia already has.

\*\*\*\* The second possible cooperative project using remote sensing capabilities pertains to an investigation of conditions and changes on coral reefs. The U.S. is currently using a version of U2 aircraft to study and document condition at the Johnston Atoll now. Recognizing that Russia probably has better information over a longer time period of Johnston Atoll, Mr. Vest proposed that Russia create a derived product on this Atoll, which would be presented at the Asia-Pacific Defense Environmental Conference in Hawaii the week of 9 September. Dr. Shulenberger then explained in greater detail the types of information that would be of the most utility for the Johnston Atoll project and he provided to the Russian delegation a letter containing these specific requests for derived products. It would be desirable to have information dating back to the 1960s and up to the present on topics such as the temperature of surface water and a map of plankton materials on the ocean bottom. In response, the Russian delegation noted a parallel interest in nuclear waste-related problems for Novaya zemlya, another island. Under the framework of studying the problems of island storage (burial) of dangerous military products, it was believed that there may be interest in such collaboration in the Russian MOD. Both parties agreed on the expediency of referencing the UN Ecological and

Biological Diversity agreement, and the potential for the DoD and MOD work with their counterparts in the Environmental ministries on such a project.

\*\*\*\*\* Also during the morning session, Col. Sheremetev made a presentation on the problems of air pollution from rocket launches. Noting that with the dissolution of the Soviet Union, Russia has been left with only two launch facilities: Plesetsk and Svobodny. Considerable money is being spent at Plesetsk to minimize environmental damage at this site. The main sources of contamination there are: fuel spillage and exhaust; sound and electromagnetic radiation; engine operations products; space life-support system products; gas release and erosion of space vehicle structures and materials in space; rocket and vehicle disintegration; and non-standard operations of nuclear vehicles. A description was then provided of the types of contamination on the earth surface, upper atmosphere, mid-atmosphere, and near space. For each, the sources of contamination, adverse effects, methods for addressing the problem, and technical means for doing so were listed. Recognizing the increase in the numbers of rocket launches, both sides agreed that the potential to increase damage to the atmosphere is a real one. It was also agreed that the need to address ocean contamination will increase. As a result of these discussions, proposals for joint work were put forth: for an information exchange and visit between two facilities, such as Plesetsk and Vandenburg; and for a joint assessment on reducing rocket pollution involving Cape Canaveral and Plesetsk.

\*\*\*\*\* During the afternoon session on 28 February, problems related to naval radioactive waste-such as the burial of radioactive spent fuel and reactors and the storage of radioactive materials-were addressed. Both Col. Yunak and Dr. Trautman explained the handling procedures for the transport of radioactive wastes and decommissioned nuclear submarines, including what governmental authority is responsible for each step of the handling process. One challenge facing Russia is that 70 nuclear submarines are being decommissioned in the near future, but the infrastructure can support the disposal of only 2 per year. Dr. Trautman provided to the Russian delegation the following documents: "Final Environmental Impact Statement on the Management of Department of Energy Spent Fuel" and the Environmental Monitoring and Disposal of Radioactive Wastes from US Naval Nuclear-powered Ships and Their Support Facilities." (Because of the length of these documents, they are not included as attachments to this report.) It was agreed that this topic will be addressed under the framework of the Russia-US-Norway Arctic Military Environmental Cooperation (AMEC) program. When preparing project proposals for AMEC, it was stressed that the focus must be specifically on military-related radioactive issues (such as the organization and training of personnel who handle and dispose of these radioactive materials). It was also suggested that such proposals be developed so that the AMEC Secretariat could review them in May/June 1996 in preparation for the Ministerial meeting in September 1996 in Murmansk.

2/29

Trip to Aberdeen

0950

Introduction: COL James Bosley, Garrison Commander

1000

Overview of Aberdeen Proving Ground (APG): Mr. Joe Craten

- Mr. Craten described APG's environmental management goals, including emphasis on developing partnerships with federal, state, and local regulators.

- organizational overview, funding procedures

- delegation noted that there is a similar chemical weapons testing ground in Russia. The local population often conducts inspections of this site, which no longer produces the chemical weapons. Does the U.S. have similar interaction with public? Mr. Craten noted ABG's public information committees and tours for the public.

- delegation asked about environmental impact statements at ABG

1030

Compliance briefing: Mr. Tim McNamara

- Mr. McNamara described APG's air quality program, drinking water protection requirements, wastewater treatment, oil control/spill prevention and response, and underground storage tanks, solid waste disposal (including "waste to energy" incinerators), hazardous waste management. The presentation emphasized best management practices and pollution prevention - simple solutions such as drip pans under storage drums, training at all levels, etc.

1045

Installation Restoration: Mr. Ken Stachiw

- Mr. Stachiw detailed restoration efforts at APG, particularly activities at sites where chemical waste and unexploded ordnance co-exist underground. The delegation noted that chemical waste is not disposed of underground in Russia, which saves the Russian MOD from having to address these types of problems.

1115

Aberdeen Test Center, Fire Safety Test Enclosure: Mr. John McFassel

- Mr. McFassel described APG's new enclosed fire safety test center and described efforts to reduce the need for ozone-depleting substances for fire fighting.

1145

Lunch

1300

POL Contamination briefing/site visit

- delegation visited site where POL contamination cleanup is taking place. COL Sheremetev noted the striking similarity between the U.S. and Russian cleanup methods for this type of contamination.

1400

Nike site briefing

-presentation on cleanup efforts at closed Nike missile silo sites. The delegation noted that filling the silos with concrete seemed to be an expensive operation, though the action was a permanent solution to any contamination problems.

1500

O-Field briefing/site visit

-delegation visited O-Field, a former munitions disposal site, including chemical munitions. The delegation was interested in the site's use of biomonitoring of fish which are placed in treated groundwater from the site.

3/1

Meeting at the Airport Hilton

0800-1200

#### ODS Discussions

-Paul Piscopo outlined work that has been conducted in the office of Naval Research since 1991 on alternative technologies for ozone depletion substances (ODS). Representatives from other US govt. agencies also participated in the discussion. Mr. Piscopo described the uses of ODS by the US DoD in its weapons systems and how much of these materials were used in the early 1990's by DoD.

-A halon alternative research and development steering group was established in 1991 to provide oversight and technical direction concerning ODS alternatives for use in weapons systems. Its function and composition were described.

-In 1992 a technology strategy for ODS alternatives was developed focusing on seven specific applications (five dealing with halon and two with CFCs and trichlorethane).

-Emphasis was placed on identifying alternatives readily available from industry.

-In 1993 a technology development plan was created to implement this strategy. Mr. Piscopo then described in detail some of the research activities that have been pursued and the results obtained under this plan.

-The presentation was concluded by his outlining a new program on next generation fire suppression technology. The program is to identify environmental-friendly and user-safe processes, techniques and fluids that meet operational requirements currently satisfied by Halon-1301.

#### Protocol revisions

-During the course of the meeting, drafts of a protocol outlining the progress of this meeting were discussed, amended, and then signed on 1 March 1996 in the English and Russian languages.

Other items discussed during the concluding session were next steps on the AMEC program, the next meeting of this bilateral group, plans for exhibits at the conference in Hawaii, and the development of detailed action plans.

Col. Sheremetev provided documentation about existing Russian contacts with the World Bank on Arctic environmental contamination projects, and Ms. Goodman agreed that the US will contact the designated official(s) at the World Bank. Col. Sheremetev also proposed for consideration a project looking at the environmental effects of US and Russian (and other UN) troop operations in the former Yugoslavia. Ms. Goodman welcomed this proposal and proposed the development of a concept plan to lay out the scope of such a project. Discussion included the use of Russian aircraft which would be able to conduct environmental assessments, under the context of Open Skies.

Ms. Goodman provided a letter to Gen. Grigorov outlining the ability of Secretary of Defense Perry to visit Russia in late September 1996 for a ministerial meeting in connection with the planned AMEC meeting. Both parties agreed on the need to establish a format for project proposals for AMEC. The US will prepare a draft format for circulation to Russian and Norwegian counterparts within the next two weeks. The schedule for AMEC activities was agreed upon as follows:

March 1996: agree on format for project proposals

April/May: all three countries to submit project proposals to the Secretariat

June: Secretariat reviews all proposals and prepares them for consideration by the Secretariat Directors and subject experts.

July/August: Joint meeting of subject experts to discuss the specific project proposals. Also, a joint meeting of experts in international law to draw up the final version of the protocol to be signed at the ministerial meeting in September.

September: AMEC meeting week of 22 September. Currently plans for ministerial meeting at the same time.

In the field of bilateral cooperation under the Perry-Grachev environmental agreement, Ms. Goodman noted that certain steps have already been undertaken to implement ideas laid out in the protocol. First, Mr. Rick Lemaire has been established as the point of contact for the proposal to have Russian environmental teachers and experts attend environmental courses in the US. Work has also begun on setting up electronic mail connections. The US offered to use the protocol signed at this meeting as the basis for developing draft action plans and tentative schedules for specific projects; these drafts will be sent to Russian counterparts in the next few weeks so that in 6-8 weeks the two sides will have agreed-upon action plans. At the same time this draft material is sent, the US will propose a schedule of meetings for this bilateral program for 1996-97 (including an identification of times when US members will be traveling to Europe, so perhaps sidebar meetings could be arranged). This will allow the sides to establish a schedule for this bilateral process in the next 6-8 weeks.

There was some discussion about the format for the joint exhibit of our cooperation in Hawaii. It was agreed that there would be one display outlining the framework of this cooperation (the memorandum on cooperation and the protocol signed at this meeting), highlighting the planned projects. There would also be visual displays of 1 or 2 of these cooperative projects. One logical display would be of the derived products already created on Yeysk and Eglin Air Force bases; another could be on coral reef work.



Ms. Goodman welcomed the paper prepared by Gen. Grigorov and Col. Yunak on military-industrial potential to address environmental problems. An attempt will be made to find a suitable journal to publish this paper in the US. It was also suggested that Gen. Grigorov and Ms. Goodman could co-author another article, perhaps for publication in the journal "Ecos."